

### **REMARKS/ARGUMENTS**

With entry of the above amendment, claims 1-6, 8, 10 and 21 are pending. Claims 11-17 were previously withdrawn from consideration pursuant a restriction requirement. Support for amended claim 1 can be found at least at pg. 7 l. 24 to pg. 8 l. 1, and pg. 9 ll. 19-23. The amendment to claim 3 merely addresses the Examiner's objection that the claim was unclear. Claim 10 was amended to include proper Markush language. Claims 8 and 21 were amended to correct the dependency. Accordingly, Applicants respectfully submit that no new matter has been added.

#### ***Objections to the Drawings***

The drawings were objected to as failing to comply with 37 C.F.R. 1.84(p)(5) because the reference numeral 4 was not included. The reference numeral 4 has been included and the corrected drawing sheet have been submitted herewith pursuant to 37 C.F.R. 1.121(d).

#### ***Rejection under 35 U.S.C. § 112***

The Examiner rejected claims 1-10 and 21 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. The Examiner specifically directs the rejection to claims 1-4, 7 and 10. However, the Examiner fails to identify why claims 5, 6, 8, and 9 are indefinite other than as being dependent on claims 1-4, 7 or 10. Accordingly, Applicants will address only those claims specifically addressed by the Examiner.

With respect to claims 1 and 2, the Examiner states that "Flodex index" is indefinite because it is not well known in the art. Applicants respectfully disagree. The Flodex index is a known measure of flowability of a powder by gravity in the field of powder rheology. *See* attached Exhibit 3, p. 22 "Approches qualitatives et comparatives." The Flodex device used to

measure the Flodex index is a normalized device which is manufactured and sold by the company Hanson Research Corporation (*see* attached Exhibits 1 and 2), and which is covered by U.S. Patent No. 4,274,286. Moreover, the Flodex index is described at least on pg 5, ll. 2-32 of the specification. Accordingly, the term “Flodex index” is known in the art, described in the specification and is not indefinite.

With respect to claims 3 and 4, the Examiner states that the term “compressibility index” appears to be defined within the brackets, but it is not clear whether it is. Claim 3 has been amended to delete the bracketed language. The term “compressibility index” is defined on pg. 6, ll. 1-2 as “(packed density – apparent density) X 100 / packed density.” Accordingly, as a defined term and with the amendment to claims 3 and 4, no confusion should exist.

With respect to claim 7, the Examiner states that the language between the parentheses is indefinite. Claim 7 has been cancelled rendering the objection moot.

With respect to claim 10, the Examiner states the improper Markush language renders the claim indefinite. Claim 10 has been amended to include proper Markush language, rendering the rejection moot.

***Rejections under 35 U.S.C. § 103(a)***

***EP 1172334***

The Examiner rejected claims 1-10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over EP 1172334 (“EP ‘334”). The Examiner asserts that EP ‘334 suggests the claimed zinc oxide powder having the claimed BET surface area. The Examiner argues that where the claimed and prior art product(s) are identical or substantially identical, the applicant

must establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the claimed product(s).

EP '334 is directed to ultrafine zinc oxide particles which do not overlap in size with the particles disclosed and claimed in the present application. As shown in Table 2 of EP '334, the 4 "Example Materials" produced by the disclosed processes have a primary particle size ranging from 31 nm to 76 nm (0.031  $\mu\text{m}$  to 0.076  $\mu\text{m}$ ) and the 4 "Comparative Materials" disclosed have a primary particle size ranging from 30 nm to 130 nm (0.030  $\mu\text{m}$  to 0.130  $\mu\text{m}$ ). The claimed compound consists of microspherules comprised of smaller unitary particles, i.e., primary particles, having a  $D_{50}$  ranging from between approximately 1  $\mu\text{m}$  and approximately 15  $\mu\text{m}$ . Additionally, as seen in Figure 2c of the application, a curve showing distribution of particles prepared according to the claimed method, no particles can be found smaller than approximately about 0.5  $\mu\text{m}$ . Accordingly, even the largest primary particle disclosed in EP '334, i.e., 130 nm, is almost four times smaller than the smallest primary particle disclosed in the application, i.e., 0.5  $\mu\text{m}$ .

Therefore, the zinc oxide particles disclosed in EP '334 do not possess the same characteristics of the instantly claimed invention—the prior art zinc powder particles are significantly smaller. Claim 1 has been amended to indicate the size characteristics possessed by the zinc compounds claimed in the present application. Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) in view of EP '334 be withdrawn in view of the amendment.

*France 2641268*

The Examiner rejected claims 1-5, 7-10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over France 2641268 ("FR '268"). The Examiner asserts that FR '268 suggests the claimed zinc oxide powder having the claimed BET surface area. The Examiner argues that where the claimed and prior art product(s) are identical or substantially identical the applicant must establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the claimed product(s).

FR '268 discloses a powder of zinc oxide, zinc carbonate and basic zinc carbonate and processes for their manufacture. According to the disclosed process, the product is divided into particles having sizes of 1 to 50  $\mu\text{m}$ . *See* pg. 9, ll. 9-10. However, these particles do not agglomerate to form microspherules as claimed in the present application. FR '268 discloses that the particles are obtained by means of a disk turning at a high rate of between 8000 to 15000 rpm.. *See e.g.*, pg. 6, ll. 14-16 ("The pulverization of the suspension is carried out according to the invention by means of a stationary dry column."). All of the examples utilize this process. Use of this process precludes the formation of microspherules comprised of unitary particles as claimed in claim 1. Additionally, the aim of FR '268 is to increase the surface area which is accomplished by individual particles rather than agglomerates, i.e., microspherules. The individual particles create a powder finer than the particles of the present application, leading to more packing of particles and an elevated Flodex index.

Therefore, the zinc oxide particles disclosed in FR '268 do not possess the same characteristics of the instantly claimed invention—the prior art powder does not contain microspherules. Claim 1 requires a powder comprised of microspherules made of smaller

unitary particles. Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) in view of FR '268 be withdrawn.

***USPN 6,200,680***

The Examiner rejected claims 1-10 and 21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No 6,200,680 ("the '680 patent"). The Examiner asserts that the '680 patent suggests the instantly claimed zinc oxide powder which appears to have the instantly claimed characteristics. The Examiner argues that where the claimed and prior art product(s) are identical or substantially identical the applicant must establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the claimed product(s).

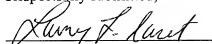
The '680 patent discloses fine zinc oxide particles and a process for producing the same. The zinc oxide particles disclosed in the '680 patent require additional additives or components. The specification of the '680 patent defines "zinc oxide fine particles" as including "composite fine particles of zinc oxide crystals and a metal element other than zinc." '680 patent, col. 14, l. 67-col. 15, l. 1. Similarly, claim 1 of the '680 patent claims "zinc oxide based particles comprising a metal oxide co-precipitate." *Id.* at col. 125, ll. 1-2.

The zinc oxide particles claimed in the present application do not require any type of additive or co-precipitate. Moreover, the prior art cannot inherently or necessarily both include an additive or co-precipitate and exclude an additive or co-precipitate, as found in the claimed compound. Therefore, the zinc oxide particles disclosed in the '680 patent do not possess the same characteristics of the instantly claimed invention—the prior art requires an additive.

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Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) in view of the '680 be withdrawn.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Larry L. Saret", is written over a horizontal line.

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